

CV. MOHAMMAD JAVAD MONEM

Last up Date: 14 June 2026



1-Personal Information

Name: Mohammad Javad Monem

Date of Birth: 30/December/1959

Place of Birth: Khorramshahr

Marital Status: Married

Address: Department of Irrigation Infra-structures, Faculty of Agriculture,
The University of Tarbiat Modarress, Tehran, Iran,
PO. Box 14155-4838

Phone: +98 912 2047267 (mobile) +98 21 48292583 (office) +98 21 48292200 (fax)

E-Mail: monem_mj@modares.ac.ir, Javadmonem@gmail.com

<http://www.modares.ac.ir/index.jsp?siteid=56&fkeyid=&siteid=30&pageid=6866&tchcode=306415>

http://www.modares.ac.ir/~monem_mj

[Orcid: 0000-0001-7735-9976](https://orcid.org/0000-0001-7735-9976)

<https://authorservices.wiley.com/index.html#orders>

2-Educational records

B.Sc.	Shiraz University	Irrigation	1986
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M.Sc.	I.H.E	Land and Water Development	1990
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Ph.D.	University of Calgary	Water Resources Engineering	1996
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3-Occupation and Professional Experiences

Assistant Professor University of Tarbiat Moddarres, from 1375-1383

Associate Professor University of Tarbiat Moddarres from 1383- to date

Head of International Research Program for Irrigation and Drainage, Iran Regional Node, from 2010-2018

General Director, Ministry of Power, Iran Water Resources Management Co. Office of Standards and Technical Criteria from 1999-2004.

4- Scientific Associations' Membership

Iranian National Committee of Irrigation and Drainage

5- Editor in Chief, Member of Editorial Board, Reviewer of Journals.

1) Editor in Chief of Journal of Water and Irrigation Management (Journal of Agriculture) from 17 Oct. 2021, to date.

2) Member of Editorial Board and reviewer of paper of the Journal of Irrigation and Drainage, the Journal of the International Commission on Irrigation and Drainage, ICID. JW. From 2011 to date.

3) Member of Editorial Board and reviewer of the papers of the Journal of Engineering Applied Research on Irrigation and Drainage Structures from Aug. 2015 to date.

4) Member of Editorial Board of the Journal of Water and Hydraulic Science, Tabriz University, from spring 2023 to date.

5) Reviewer of the papers of the Journal of Irrigation & Drainage Engineering, ASCE, American Society of Civil Engineering.

6) Reviewer of the papers of the Journal of Iran Agricultural Science

7) Reviewer of the papers of the Journal of Irrigation and Drainage, Iranian Irrigation and Drainage Association.

6- Research Interests.

1) Mathematical Modeling Performance Evaluation and Improvement of Irrigation Networks

2) Methods and Occasions of Flexibility Improvement of Irrigation Networks

3) Optimization of Operation of Irrigation Networks

4) Irrigation Networks Rehabilitation, Modernization, Optimization and Automation

5) Management and Productivity improvement of Irrigation Networks Under Water Scarce Condition

6) Development of Water, Energy, and Food Chain (NEXUS) in Irrigation Networks.

7- Published Papers in Refereed Journals.

- 1) Application of Simulation Technique for Improving the Performance of Irrigation Conveyance Systems.
- 2) Determination the Most Appropriate Water Distribution Option in Irrigation Network(Case study of Ghoori-Chai Irrigation Network) S. Koochekzadeh, **M. J. Monem**, S. Kasbdooz, Journal of Iranian Agricultural Science, Vol. 30, No. 2, 1999, PP. 369-378.
- 3) Performance Evaluation of Irrigation Networks Using Data Envelopment Analysis, **M.J.Monem**, M.R. Alirezaei, E. Salehi, Accepted for publication, Journal of Agricultural and Natural Resources Science and Technology, Vol. 6, No.4, Winter 2003. pp. 11-25, (In Persian).
- 4) Application of fuzzy technique for Performance Evaluation of Irrigation Systems, S. A. Heydarian, H. Fardad, **M. J. Monem**, A. M. Liaghat, A. Ghaheri, M. Teshnehlab, Journal of Water and Wastewater, Consulting Engineers of Design and Research in Water and Waste water, No. 47, Fall 2003, PP. 2-11, (In Persian) .
- 5) Performance Optimization of Irrigation Canals using SA, S. A. Mohseni Movahed, **M. J. Monem**, Journal of Science Free University, No. 44, Summer 2002. pp. 3565-3575. (In Persian).
- 6) Application of Water Balance Model for design of furrow irrigation system, S.A.A. Saderdinni, A.H. Nazemi, **M.J.Monem**, Journal of Agriculture Science, Tabriz University, No. 1, Vol. 13, 2003, pp. 37-50. (In Persian).
- 7) Development and Calibration of Hydraulic Relations of Deflection-meter for Discharge measurement in Irrigation Canals, **M. J. Monem**, J. M. V. Samani, E. Mehrabi, Journal of Agricultural Engineering Research Agricultural Engineering Research Institute, No. 14, Vol. 4, Spring 2003, PP. 19-36. (In Persian).
- 8) Performance Evaluation and Improvement of Eight Iranian Irrigation Networks Using Sensitivity Analysis On Data Envelopment Analysis (DEA), **M. J. Monem**, H. Ghodousi, Journal of Agricultural Science and Natural Resources, Gorgan University of Agriculture, No. 1, Vol. 11, Spring 2004, PP. 69-77. (In Persian).
- 9) Application of Fuzzy Logic for performance Evaluation of Irrigation networks, S.A.Heydarian. H.Fardad, **M. J. Monem**, A.Ghaheri, A.M.Liaghat, and M.Teshnehlab, Journal of Agricultural engineering Research, Technical and Agricultural Engineering Research Institute, Vol. 4, No. 17, Winter 2003, PP. 47-64. (In Persian).
- 10) Application of Simulated Annealing (SA) Techniques for Optimal Water Distribution in Irrigation Canals, **M. J.Monem**, R. Namdarian, Journal of Irrigation and Drainage, Vol. 54, No. 1, 2005, PP. 365-373.
- 11) Investigation of Unsteady Flow Behavior under the situation of Demand Variation and Introducing

Appropriate Operational Instruction (Case study E1R1 Canal of Dez Irrigation Network), **M. J. Monem**, A. Emadi, and H. Ghodoosi, Journal of Agricultural Engineering Research, Technical and Agricultural Engineering Research Institute, Vol. 6, No. 24, 2005, PP. 79-93. (In Persian).

12) Surge Irrigation Optimization Using Tabu Search Method, , S. A. A. Saderdinni, **M. J. Monem**, A. H. Nazemi, Journal of Iranian Agricultural Research, Vol. 37, No. 1, 2006, PP. 117-129. (In Persian).

13)Development the Mathematical Model of BIVAL Downstream Control System, **M. J. Monem**, J. Mamizadeh, Journal of Hydraulics, Vol. 1, No. 2, Winter 2005, PP. 1-13. (In Persian).

14) Performance Evaluation of Irrigation networks using Fuzzy Logic, Case Study Maroon Network, **M. J. Monem**, J. Khorrami, S.A. Heydarian, Modarress Engineering and technical Journal, Special Civil Engineering Issue, No. 2, Spring 2007, PP. 31-42. (In Persian).

15) Introducing a New Mathematical Model for the Evaluation and Optimization of Irrigation Canal Performance, S. A. Mohseni Movahed, **M. J. Monem**, Journal of Agricultural and Natural Resources Science and Technology, Vol. 11, No. 2, Summer 2007, PP.13-26. (In Persian) .

16) Simulation of Canal Control-Gates Operations Using Hydrodynamic Model, D. Farsadizadeh, Y. Hassanzadeh, **M. J. Monem**, Journal of Faculty of Eng., Vol. 32, No. 3 (Civil Eng.), Spring 2006, PP. 29-39. (In Persian).

17) Investigation of ICSS Hydrodynamic Model in Experimental Canal for Simulation of Unsteady Flow for Canal Control Systems, D. Farsadizadeh, **M. J. Monem**, Y. Hassanzadeh, Journal of Agricultural Science, Vol. 16, No. 1, 2006, PP. 147-159. (In Persian).

18) Performance evaluation module for Irrigation Systems Using Fuzzy Method, S. A. Heydarian, **M. J. Monem**, H. Fardad, A. Ghaheeri, A. M. Liaghat, M. Teshnehlab, Journal of Agricultural Science and Natural Resources, Vol. 12, No.1, April-May 2005, PP. 93-103. (In Persian).

19) Functionality Assessment of Irrigation Networks by Using Benchmarking Method, J.Jalily, J. Jebeli, H. Ghamarnia, **M. J. Monem**, Journal of Agricultural Engineering Research, Vol. 7, No. 29, Winter 2007, P. 71-88. (In Persian).

20) Optimal Water Delivery Scheduling in Irrigation Canal Using Genetic Algorithm, **M. J. Monem**, M.R. Najafi, S. Khoshnavaz, Journal of Iran Water Resources Research, Vol. 3, No. 1, spring 2007, PP. 1-11. (In Persian) .

21) Quantifying Operational Performance of Irrigation Canals in Response to Demand Variation Using Hydrodynamic Model and Analysis of Unsteady Flow, **M. J. Monem**, H. Ghodousi, A. Emadi, Jour. of Agricultural Research, Vol. 6, No. 3, Fall 2006, PP. 17-29. (In Persian) .

22) Performance Evaluation Indicators for Structural and operational Characteristics of Irrigation Networks, F. Pasyar, **M. J. Monem**, Jour. Of Agricultural Engineering Research, Vol. 9, No. 1, Spring 2008, PP. 15-30. (In Persian).

- 23) Development of Decision Support System to Evaluate and Improve the Performance of Irrigation and Drainage Networks, M. Khalkhali, **M. J. Monem**, K. Ebrahimi, Jour. Of Agricultural Engineering Research, Vol. 9, No. 1, Spring 2008, PP. 125-140. (In Persian).
- 24) Optimization of Observation Well Network for the Estimation of Ground Water Balance Using Double Water Table Fluctuation Method, N. Ganji Khoramdel, K. Mohammadi, **M. J. Monem**, Jour. Of Water and Soil (Agricultural Science and Technology), Mashhad Ferdowsi University, Vol. 22, No. 2, 2008, PP. 358-370. (In Persian).
- 25) Development of Downstream Fuzzy Control System for Irrigation Canals, **M. J. Monem**, M. S. Kiapasha, Jour. Of Hydraulics, Vol. 3, No. 4, Winter 2009, PP. 13-26. (In Persian).
- 26) Development and Evaluation of an Upstream Fuzzy Control System Model for Irrigation Canals, **M. J. Monem**, M. S. Kiapasha, Iranian Water Research Journal, Vol. 3, No. 4, Summer 2009, PP. 41-50. (In Persian).
- 27) Application of PSO Method for Optimal Water Delivery in Irrigation Networks, **M. J. Monem**, M.A. Noori, Iranian Jour. Of Irrigation and Drainage, Vol. 4, No. 1, Spring 2010, PP. 73-82. (In Persian).
- 28) Developing Computer Model for Performance Assessment of Pressurized Irrigation Conveyance and Distribution Systems (PAPIS) Using Classical Approach, P. Mahdavi, **M. J. Monem**, Iranian Jour. Of Irrigation and Drainage, Vol. 4, No. 1, Spring 2010, PP. 67-72. (In Persian).
- 29) Extracting Physical Homogenous Regions Out of the Irrigation Networks Using Fuzzy Clustering Method, S. M. Hashemy, **M. J. Monem**, Journal of Hydro-informatics, Vol. 13, No. 4, 2010, PP. 652-660.
- 30) Optimal Operation of Irrigation Canals, Under Conjunctive Use of Surface and Ground water, A. Emadi, **M. J. Monem**, K. Mohammadi, Jour. Of Agricultural Engineering Research, Vol. 11, No. 3, Fall 2010, PP. 27-40. (In Persian).
- 31) Systems Dynamics Model to Assess Irrigation Networks Modernization, M. Vaez Tehrani, **M. J. Monem**, A. Bagheri, Jour. of Agricultural Engineering Research, Vol. 11, No. 4, 2011, PP. 35-56. (In Persian).
- 32) Facilitation of Operation and Maintenance Activities of the Irrigation Networks using K-means Clustering Method; A case study of Ghazvin Irrigation Network, S. M. Hashemy, **M. J. Monem**, Jour. of Irrigation and Drainage, Vol. 61, No.1, Feb. 2012, PP. 31-38.
- 33) Spatial Clustering of Irrigation Networks Using Classical K-Mean Method, **M. J. Monem**, S. M. Hashemi Shahedani, Iranian Jour. of Water Resources Research, Vol. 7, No. 1, spring 2011, PP. 38-46. (In Persian).
- 34) Construction and Evaluation of PID Automatic Control system for Irrigation Canals at Laboratory Scale, K. Shahverdi, **M. J. Monem**, Jour. of Hydraulics, Vol. 5, No. 2, winter 2010, PP. 65-75. (In Persian).
- 35) Evaluation of Fuzzy Automatic Control System and Comparison of two Rule bases for pivot weir, Reza Nowrasteh, **M. J. Monem**, Jour. Of Hydraulics, Vol. 6, No. 3, Fall 2011, PP. 1-12. (In Persian) .
- 36) Construction and Evaluation of BIVAL Automatic Control System for Irrigation Canals in Laboratory Flume, K. Shahverdi, **M. J. Monem**, Jour. of Irrigation and Drainage, Vol. 61, No. 2, Apr. 2012, PP. 201-207.

- 37) Development and test of Mathematical Model of Automatic Pivot Weir with PID Algorithm, Z. Hoseinzadeh, **M. J. Monem**, Jour. Of Iran Soil and Water Research, Vol. 43, No. 3, 2012, PP. 87-94. (In Persian) .
- 38) Optimizing groundwater monitoring networks using the particle swarm algorithm, N. Ganji Khorramdel, S. Javadi, K. Mohammadi, K. Howard, **M. J. Monem**, Groundwater Quality Sustainability, IAH Selected papers on hydrogeology, August 6 2012, CRC press, 370 p. ISBN 9780415698412.
- 39)"Analyzing Structural and Non-Structural Options to Improve Utility of Irrigation Areas Using a System Dynamics Approach M. Vaez Tehrani, , A. Bagheri, **M. J. Monem**, S. Khan Journal of Irrigation and Drainage, Vol. 61, No. 4, PP. 604-621, 2012.
- 40) Improvement the Main Irrigation Canal Operation Using In-Line Storage Strategy with the aid of Model Predictive Control System (MPC), S. M. Hashemy, **M. J. Monem**, P. J. Van Overloop, Iranian Jour. Of Irrigation and Drainage, Vol. 6, No. 4, Winter 2012, PP. 342-352. (In Persian).
- 41) Using In-Line Storage in Automatic Control Systems for Upgrading Operation Process of the main Irrigation Canal (Case Study of Main Canal of Dez Network), S. M. Hashemy, **M. J. Monem**, S. Isapoor, Jour. of Hydraulics, Vol7, No. 3, Winter 2012, PP. 1-14. (In Persian).
- 42) A System Dynamics Approach to Model Rehabilitation of Irrigation Networks (Case study: Qazvin Irrigation Network, Iran), M. V. Tehrani, **M. J. Monem**, A. Bagheri, Jour. Of Irrigation and Drainage, Vol. 62, No. 2, PP. 193-207, 2013.
- 43)Application of an In-Line Storage Strategy to Improve the Operational Performance of Main Irrigation Canals Using Model Predictive Control, S. M. Hashemy, **M. J. Monem**, J. M. Maestre, and P. J. Van Overloop, ASCE Journal of Irrigation and Drainage Engineering. 10, 1061, 1943-4774, 2013.
- 44) Using Inline Reservoir Operational Strategy to Improve Dez Main Irrigation Canal Performance, S. M. Hashemy, **M. J. Monem**. S. Isapoor, and P. J. Van Overloop, Jour. of Irrigation and Drainage, Vol. 62, No. 2, PP. 458-467, 2013.
- 45) Development of Performance Evaluation Model of Pressurized Irrigation Networks (NPAPIS), S. Piri, M. J. Monem, F. Hasanpoor, Iranian Irrigation and Drainage Jour., Vol. 6, No. 3, Fall 2012, PP. 196-205. (In Persian).
- 46) Development of Mathematical Model of CARDD control System for Irrigation Canals and its integration with ICSS model and testing it with ASCE test cases, **M. J. Monem**, S. P. Ahmadpanah, Jour. of Agricultural and Natural Resources, Science and Technology, Water and Soil Science, Vol. 16, No. 61, Fall 2012, PP. 15-29, (In Persian) .
- 47) Development of Performance Evaluation of Automatic Control Systems for Irrigation Networks, F. Sadeghi, **M. J. Monem**, Iranian Jour. Of Water and Soil Research, Vol. 44, No. 2, Summer 2013, PP. 142-135. (In Persian).
- 48) System dynamic model development for irrigation network rehabilitation, considering farmers participation personnel promotion Hatam, A., **Monem, M.J.** & Bagheri A. Journal of Agricultural Engineering Research,

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49) Integrated Stepwise Approach for Optimal Water Allocation in Irrigation Canals, A. Kanooni, **M. J. Monem**, Jour. of Irrigation and Drainage, Vol. 63, No. 1, PP. 12-21, 2014.

50) Performance Evaluation and Introducing the most Appropriate Control Structure for Irrigation Canals Using CanalMan Hydrodynamic Model, S. M. Safavi, E. Amiri Takeldani, **M. J. Monem**, Iranian Water Research Jour. Vol. 8, No. 14, Summer 2014, PP. 147-154. (In Persian).

51) Spatial and Temporal Investigation of Salt Intrusion in Estuary Rivers Using COHERENCE Model: Case Study of Bahmanshir River, S. P. Pirnia, J. M. V. Samani, **M. J. Monem**, Jour. of Water and Irrigation Management, Vol.3, No. 1, Summer 2015, PP. 13-27. (In Persian).

52) Application of Reinforcement Learning Algorithm for Automation of Canal Structures, K. Shahverdi, **M. J. Monem**, Jour. of Irrigation and Drainage. Vol. 64, No. 1, PP. 77-84, Feb. 2015.

53) Experimental Determination of Discharge Coefficient of Automatic Pivot Weir, Z. Hosenzadeh, **M. J. Monem**, S. Kochakzadeh, Water Engineering Specialized Scientific Quarterly of Shushtar Azad Universit, Vol. 2, No. 1, Spring and Summer 2015, PP. 39-46.

54) Development of Multi-Attribute Decision Making Model for Selection of Automatic Water Measurement Systems in Irrigation Networks, Z. Hoseinzadeh, **M. J. Monem**, N. Nahavandi, Jour. of Water and Irrigation Management, Vol.4, No. 2, Fall 2015. (In Persian).

55) Tuning of PID Controller for Water Level Control Using Genetic Algorithm, S. Jamali, **M. J. Monem**, Iranian Jour. of Irrigation and Drainage, Vol. 3, No. 8, Sep. 2015, PP. 581-590. (In Persian).

56) Simulation-Optimization of Irrigation Networks Performance Under Different Operations Using Ants Colony Algorithm, **M. J. Monem**, H. Ghodoosi, Iranian Jour. of Irrigation and Drainage, Vol. 4, No. 8, Winter 2014, PP. 654-663. (In Persian).

57) System Dynamics Model for Foomanat Irrigation Network, from Adequacy and Equity Point of view, S. Shabani, **M. J. Monem**, A. Bagheri, Iranian Jour. of Irrigation and Drainage, Vol. 4, No. 8, Winter 2014, PP. 826-836. (In Persian).

58) Application of Association Rules to infer Relationships Between Physical Parameters and Operational Indices of Irrigation Networks, (Case Study of Ghazvin Irrigation Network), V. Ghadbeigi, **M. J. Monem**, S. M. Hashemi, Iranian Jour. of Irrigation and Drainage, Vol. 9, No. 1, Feb. 2015, PP. 44-53. (In Persian).

59) Optimal Design of Groundwater Monitoring Network Using Particle Swarm Optimization Meta Heuristic Method, N. Ganji. Khorramdel, F. Kikhaei, K. Mohammadi. **M. J. Monem**, Jour. of Hydraulics, Vol. 10, No. 1, Spring 2015, PP. 25-35. (In Persian).

60) Application of Re-Enforcement Learning Method for Determination of On-Request Operational Instruction and Optimal Water Distribution, K. Shahverdi, **M. J. Monem**, M. Nili, Iranian Jour. of Soil and Water Research, Vol. 46, No. 2, 2015, PP. 291-283. (In Persian).

61) Development of Mathematical Model of Re-Enforcement Learning algorithm for Automatic Operation of

Flat Slide Gate Check Structures in Canals, K. Shahverdi, **M. J. Monem**, Jour. Of Soil & Water, (Science and Agricultural Industry) Ferdowsi University of Mash-Had, Vol. 29, No. 4, Oct. 2015, PP. 828-837. (In Persian).

62) Fuzzy SARSA Learning of Operational Instructions to Schedule Water Distribution and Delivery, K. Shahverdi, **M. J. Monem**, M. Nili Ahmadabadi, Jour. of Irrigation & Drainage, Vol. 65, No. 1, PP. 276-284.2016.

63) Development of a Simple Rating Equation for Pivot Weirs with Different Side Contractions, N. Sheikh Rezazadeh Nikoo, **M. J. Monem**, Jour. of Water and Soil, Ferdowsi University of Mash-Had, Vol. 30, No. 1, April 2016, PP. 52-62. (In Persian).

64) Performance Evaluation of Water Distribution in Main Canal of Kowsar Irrigation Network with Upstream and Downstream Automatic Control, S. Nikmehr, A. Parvaresh Rizi, **M. J. Monem**, Iranian Water Research Jour., Vol. 11, No. 1, PP 109-118, Spring 2017, (In Persian).

65) Estimation of Flow Equation and Discharge Coefficient for Lopac Gates under Submerged Condition, F. Yosefvand, **M. J. Monem**, M. R. Kavianpoor, Iranian Water Research Jour. 2015, (Accepted, In Persian).

66) Extraction of flow Rate Equation under Free and Submerged Flow Conditions in Pivot Weirs with the Different Side Contractions, N. Sheikh Rezazadeh Nikou, M. J. Monem, K. Safavi, Jour. of Irrigation & Drainage Engineering, ASCE, Vol. 142, No. 8, Aug. 2016, PP. 040160251-040160258. (DOI: 10.1061/(ASCE)IR.1943-4774.0001027).

67) Extraction of Submerged Discharge Equation and Discharge Coefficient for Pivot Weir, with Different Side Contractions, N. Sheikh Rezazadeh Nikoo, **M. J. Monem**, K. Safavi, Jour. Of Irrigation and Drainage, Vol. 9, No. 5, Dec. 2015, PP. 691-700 (In Persian).

68) Experimental and Analytical Evaluation of Discharge Coefficient of Lopac Gate for Submerged Condition, F. Yosefvand, **M. J. Monem**, M. R. Kavianpoor, Jour. Of Irrigation and Drainage, Vol. 9, No. 5, Winter 2015, PP. 811-819 (In Persian).

69) Water Allocation and Delivery Scheduling In Irrigation Networks, A. Kanooni, **M. J. Monem**, Jour. Of Irrigation and Drainage, Vol. 10, No. 1, Apr. 2015, PP. 12-23. (In Persian).

70) Determining Different Hydraulics and Operational Conditions of Lopac Gate and Development its Mathematical Model in Accordance with Boundary Conditions of Hydrodynamic Model, R. Naghaei, **M. J. Monem**, S. M. Hashami, Jour. Of Irrigation and Drainage, Vol. 10, No. 1, Apr. 2015, PP. 24-35. (In Persian)

71) Development of Mathematical Model of LOPAC Gate in Accordance with the ICSS Hydrodynamic Model, R. Naghaei, **M. J. Monem**, Jour. Of Irrigation & Drainage Engineering, ASCE, Vol. 142, No. 10, Oct. 2016, PP. 040160431-040160438. (DOI: 10.1061/(ASCE)IR.1943-4774.0001066)

72) Comparing the Performance of FSL and Traditional Operation Methods for On-Request Water Delivery in Aghili Network, Iran, H. Savari, **M. J. Monem**, K. Shahverdi, Jour. Of Irrigation & Drainage Engineering, ASCE, Vol 142, No. 11, Nov. 2016, PP. 1-8. (10.1061/(ASCE)IR.1943-4774.0001089)

73) New Discrete particle swarm optimization applied to the design of pressurized irrigation networks, **M. J. Monem**, B. S. Kashkouli, Jour. Of Irrigation & Drainage Engineering, ASCE, Vol. 143, No. 1, Jan. 2017, PP.

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74) Optimal designing of on-demand pressurized irrigation water distribution networks (layout, pipe size and energy included), M. Masoumi, B. S. Kashkouli, **M. J. Monem**, Jour. Of Water Resources Management, Vol. 30, No. 14, Nov. 2016, PP. 5051-5063. (doi:10.1007/s11269-016-1468-6)

75) Investigation the Effect of Automation of Ghazvin Irrigation Network on Operational Improvement Using System Dynamic Approach, S. Z. Mousavi Hasani, **M. J. Monem**, M.Vaez Tehrani, Journal of Irrigation and Drainage, No. 1, Vol. 11, Apr. 2017, PP. 80-92. (In Persian)

76) Development of Conceptual Model for Application of Hydro-mechanical Gates in Irrigation Networks by System Dynamic Approach, Z. Hosseinzadeh, **M. J. Monem**, N. Nahavandi, M. Vaez Tehrani, Jour. of Irrigation & Drainage, 2017,

77) Decision-making in irrigation networks: Selecting appropriate canal structures using multi-attribute decision analysis, Z. Hosseinzadeh, A. Sheree, P. K. Ponnambalam, **M. J. Monem**, Science of The Total Environment, Volumes 601–602, 1 December 2017, Pages 177–185. (doi.org/10.1016/j.scitotenv.2017.05.189)

78) Performance Evaluation and Development of Optimal Water Delivery Pattern for Zarrineh-Rood Irrigation Network, S. Khodadadi, M. Yasi, **M. J. Monem**, Journal of Water and Irrigation Management, Vol. 7, No. 1, Spring & Summer 2017, PP. 105-119. (In Persian) .

79) Experimental Investigation of the Effect of Submergence and Entrance Transition on Discharge Equation of Lopac Gate, F. Yosefvand, **M. J. Monem**, M. R. Kavianpour, Jour. of Iranian Water & Soil Research, 2017. (Accepted, In Persian)

80) Role of In-Line Reservoir Management on Operational Improvement of Irrigation Network, Case Study, Moghan Irrigation Network, **M. J. Monem**, S. M. Hashemi, H. Eslambolchizadeh, Jour. of Water Research for Agriculture, Vol. 31, No, 4, Winter 2017, (In Persian)

80 Editorial, Selected Papers of the 13 th International Drainage Workshop, Ahvaz, Iran, **M. J. Monem**, M. Akram, B. Schultz, Journal of Irrigation and Drainage, Vol. 67, Supplement 2, Aug. 2018, PP. 5-7.

81) Classifying Iranian Irrigation Networks Based on Regulating Structures Problems and Proposing a Common Solution to Enhance Their Performance, F. Karimi, **M. J. Monem**, S. M. Hashemi, Iranian Journal of Irrigation and Drainage, Vol. 12, No. 5, PP. 1292-1303, Dec.-Jan. 2018.

82) Determination the Relationship of Submergence Threshold for Lopac Gate in Different Flow Condition and Gate Opening F. Yousofvand, **M.J. Monem**, and M.R. Kavianpour, Journal of Iranian Irrigation and Drainage, Vol. 13, No. 3, Sep. 2019, pp. 647-656.

83) Investigating the Impact of Distribution and Delivery Management in Water shortage Conditions on Water Productivity Index Using Hydrodynamic and Crop Production Model F. Ebrahimian1, **M. J. Monem**, M. Delavar, Journal of Irrigation and Drainage, Vol. 13, No. 1, Apr. -May, 2019, PP. 142-152.

84) Energy Harvesting Using Solar ORC System and Archimedes Screw Turbine (AST) Combination With Different Refrigerant Working Fluids, Journal of Energy Conservation and Management, K. Shahverdi, R. Loni, B. Ghobadian, **M.J. Monem**, S. Goharid, S. Marofic, G. Najafi, Journal of Energy Conservation and

Management, Vol. 187, 2019, PP. 205-220.

85) Development of Quantified Model for Application of Control Systems in Irrigation Networks by System Dynamic Approach, Z. Hosseinzadeh Gazichaki, and **M. J. Monem**, Journal of Irrigation and Drainage, Vol 68, 2019, PP. 433-442, DOI: 10.1002/ird.2331.

86) Application and Evaluation of Water, Food and Energy (NEXUS) in Irrigation Networks Management Case Study of Zayandehrud Irrigation Network, **M. J. Monem**, M. Delavar, S. M. Hoseini, Journal of Iranian Irrigation and Drainage, Vol. 14, No. 1, May, 2020, pp. 275-285.

87) Zoning of Water Quality of Bamdezh Wetland (Khoozestan Province) Using Spatial and Temporal Krijing Approach, Journal of Wetland Echobiology, Ahvaz Azad University, M. Naseri, **M. J. Monem**, K. Shahverdi, M. Afsoos, Vol. 12, No. 44. Summer 2020, PP. 19-36.

88) Development of Water, Energy and Food Nexus Model in Irrigation Networks Based on Water Adequacy and Stability Indicators (Qazvin Irrigation Network Case Study) E. Ghorbani, **M. J. Monem**, and M. Vaez Tehrani, Journal of Irrigation and Drainage Structures Engineering Research, Vol. 21, No. 80, Autumn 2020, PP: 61-80.

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- 84) Effective Parameters for Evaluation of Rubber Dams, F. Sadeghi, **M. J. Monem**, 1st International Conference and 3rd National Conference Dams and Hydro Power Plants, Tehran, Iran, 8-9 Feb. 2012. (in Persian)
- 85) Introducing Technologies for Automatic Water Level Measurement in Irrigation Networks, and Their Performance Indicators, F. Sadeghi, **M. J. Monem**, National Convention on Monitoring and environmental modeling, Tehran, Iran, Feb. 2012. (in Persian)
- 86) Using Local PI Control method to Improve the Operation of Main Irrigation Canal with In-Line Storage, S.

M. Hashemy Shahedany, **M. J. Monem**, S. Isapoor, P. J. Van Overloop, European Geoscience Union, General Assembly, Vienna, Austria, 2012.

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93) Tuning PID Controller Using Genetic Algorithm for Water Level Control in Irrigation Canal, S. Jamali, **M. J. Monem**, 1st World Irrigation Forum, 29 Sep. 5 Oct. 2013, Mardin Turkey.

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101) Investigation the Archie-Types of Automation Application in Irrigation Networks From Authorities Point of View Using System Dynamics Approach, S. Z. Moosavi, Z. Hoseinzadeh, **M. J. Monem**, 6th National Convention on Watershed and Water and Soil Management, Bahonar University, Kerman, Iran, 18-19 Feb, 2014. (in Persian)

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105) Development of On-Request Operational System in Irrigation Systems Using Re-Enforcement Learning Method, K. Shahverdi, **M. J. Monem**, 4th National Convention of Irrigation and Drainage Networks Management, Shahid Chamran University, Ahvaz, Iran, 25-27 Feb. 2014. (in Persian)

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107) Dynamics Model for Application of Automation in Irrigation Networks, z. Hoseinzadeh, S. Z. Moosavi, **M. J. Monem**, 4th National Convention of Irrigation and Drainage Networks Management, Shahid Chamran University, Ahvaz, Iran, 25-27 Feb. 2014. (in Persian)

108) Recognition of Archie-Types of System Dynamics of Foomanat Irrigation Network Based on Adequacy and Water Distribution Equity Indices, S. Shabani, **M. J. Monem**, A. Bagheri, 4th National Convention of Irrigation and Drainage Networks Management, Shahid Chamran University, Ahvaz, Iran, 25-27 Feb. 2014. (in Persian)

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- 110) EFFECT OF General and Regional Attributes on Ranking of Automatic Discharge Measurement Systems, Z. Hosseinzadeh, **M. J. Monem**, N. Nahavandi, 22nd ICID Congress, Gwangju, Rep. of Korea, 14-20 Sep. 2014.
- 111) Extracting Operational Instructions for Irrigation Canals Using FSL Algorithm (Case study: Dez Irrigation Network, Iran), K. Shahverdi, **M. J. Monem**, 22nd ICID Congress, Gwangju, Rep. of Korea, 14-20 Sep. 2014.
- 112) Different Floods Originating from Dam Break and Action Plan for Crises Management in Golestan Province, S. Bameichi, M. A. Bani Hashemi, **M. J. Monem**, 2nd National Conference on Flood Engineering and Management with focus on Urban Floods. Tehran, Iran, 30 Sep. 1 Oct. 2014. (in Persian)
- 113) Development of Discharge Equation of Lopac Gate as a Check Structure with side Contraction Using Energy Equation for Free Flow Condition, F. Yosefvand, **M. J. Monem**, 2nd Convention on Farm Water Management, Karaj, Iran, 21 Oct. 2014. (in Persian)
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- 115) Comparison of the application of Different Check Structures in Irrigation Canals Using ASCE Standard Test Cases, S. Sadeghi, **M. J. Monem**, 13th Iranian Hydraulics Conference, Tabriz, Iran, Oct. 2014. (in Persian)
- 116) Improving Flexibility or decreasing Water Consumption? Where is the Balancing Point? **M. J. Monem**, Technical Convention on Investigation of Water Delivery and Irrigation Methods Development Policies in Iran, Agricultural Technical and Engineering Institute, Karaj, Iran, 3-4 Dec. 2014. (in Persian)
- 117) Simulation of Operation of Lopac Gate and Development of its Operational Instruction in E1R1 Canal of Dez Irrigation Network. R. Naghaei, **M. J. Monem**, 1st Iranian Irrigation and Drainage Congress, Ferdowsi University, Mash-Had, Iran, 13-14 May 2015. (in Persian)
- 118) Introducing MASSCOTE Method for Performance Evaluation of Irrigation and Drainage Systems, S. Rahmati, **M. J. Monem**, 1st Iranian Irrigation and Drainage Congress, Ferdowsi University, Mash-Had, Iran, 13-14 May 2015. (in Persian)
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- 120) Extracting Rating Curves of Pivot Weirs with Different Side Contractions, N. Sheikh Rezazadeh Nikoo, **M. J. Monem**, K. Safavi, A. N. Ziaei, 1st Iranian Irrigation and Drainage Congress, Ferdowsi University, Mash-Had, Iran, 13-14 May 2015. (in Persian)
- 121) Evaluation the Functioning of Two Baffle Neyrpic Gate Type XX2 Manufactured in Iran Compared to Standard Gate, H. Noori, P. Hahghatjoo, **M. J. Monem**, S. M. Razavi Nabavi, 1st Iranian Irrigation and Drainage Congress, Ferdowsi University, Mash-Had, Iran, 13-14 May 2015. (in Persian)
- 122) Comparison of Lopac Gate and Flat Slide Gate in Irrigation Canals Under ASCE Standard Test Cases, S. Sadeghi, **M. J. Monem**, 1st Iranian Irrigation and Drainage Congress, Ferdowsi University, Mash-Had, Iran, 13-14 May 2015. (in Persian)
- 123) Comparison of Automated Control Systems for Main Canal of Qazvin Irrigation Network, Z. Hosseinzadeh, **M. J. Monem**, 26th ERC, & 66th EIC, ICID Congress, Montpellier, France, 11-16 Oct. 2015.

- 124) Investigation the Performance of Lopac Gate for Transition Condition, and analysis of its Discharge Coefficient Using Mathematical Model, R. Naghaei, **M. J. Monem**, 14th Hydraulic Conference, Zahedan, Sistan & Baloochestan University, Zahedan, Iran, 11-12 Nov. 2015. (in Persian)
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- 126) Development the Basis, and Classification of On-Request Water Delivery method for Irrigation Networks, H. Savari, **M. J. Monem**, 15th Iranian Hydraulic Conference, International University of Imam Khomeini, Ghazvin, Iran, 15-16 Dec. 2015. (in Persian)
- 127) Unsteady 2D Hydrodynamic and Quality Modelling of Bamdej Wetland, M. Mazaheri, M. Naseri, **M. J. Monem**, M. Ghiasi, 10th International River Engineering Seminar, Shahid Chamran University, Ahvaz, Iran, 19-21 Jan. 2016. (in Persian)
- 128) Determination the Canal Capacity for On-Request Water Delivery Using Clements Model, Case Study East Aghili Network, R. Naghaei, **M. J. Monem**, 16th Iranian Hydraulic Conference, University of Mohaghegh Ardebili, 6-7 Sep. 2017. (in Persian)
- 129) Determination and Comparative investigation of Water Productivity Indices (CPD) in Garmsar Irrigation and Drainage Network, F. Ebrahimian, **M. J. Monem**, M. Delavar, 8th National Scientific and Research Conference on Watersheds and Water and Soil Resources Management, Water and Irrigation Engineering Association, Iran, Kerman, Jan. 2018. (in Persian)
- 130) Introducing Numerical Simulating and Developing an Archimedes Screw Model as a Turbine, K. Shahverdi, B. Ghobadian, **M. J. Monem**, 4th International Technology and Energy Management Convention, Shahid Beheshti University, Tehran, 30-31 Jan. 2018.
- 131) Investigation a 12 hr. Water Delivery in Irrigation Canals Using Fuzzy SARSA Re-Enforcement Learning Algorithm, K. Shahverdi, **M. J. Monem**, 1st Soil, Water, and Environmental Science Congress, Shahid Beheshti University, Tehran, 2-3 March 2018. (in Persian)
- 132) Investigation the Details of Learning Generalization of Fuzzy SARSA Learning Algorithm for Large and Small Scale problems of Water Delivery Scheduling in Irrigation Networks, K. Shahverdi, **M. J. Monem**, 1st Soil, Water, and Environmental Science Congress, Shahid Beheshti University, Tehran, 2-3 March 2018. (in Persian)
- 133) Improving Water Consuming Productivity of Potato in Water Deficit Condition in Aghili Irrigation and Drainage Network, Using Managerial approach, F. Ebrahimian, **M. J. Monem**, M. Delavar, th National Convention of Irrigation Network Management, and 3rd Iranian National Irrigation and Drainage Congress, Ahvaz, Iran, 6-7 March 2018. (in Persian)
- 134) Determination of Water Productivity of Wheat in Irrigation Network Using Artificial Neural Network RBF and Hydrodynamic Model in different Water Scarce situation, E. Ghorbani, **M. J. Monem**, M. Aslani, 17th Iranian Hydraulic Conference, Shahre-Kord University, Share-Kord, Iran, 4-6 Sep. 2018. (In Persian)
- 135) Determination the Basis of Three Methods of Rotational, Arranged, and On-Demand for Calculation of

Irrigation Canal Capacity Using Celman Model (Case Study: Aghili Network), R. Naghaei, **M. J. Monem**, 17th Iranian Hydraulic Conference, Shahre-Kord University, Share-Kord, Iran, 4-6 Sep. 2018. (In Persian)

136) Performance Evaluation of Lopack Gate and Comparison to Traditional Structures using ICSS Mathematical Model, S. Sadeghi, **M. J. Monem**, 17th Iranian Hydraulic Conference, Shahre-Kord University, Share-Kord, Iran, 4-6 Sep. 2018. (In Persian)

137) Improvement of Water Productivity in Irrigation and Drainage Networks in Water Scarce Condition, using Bankruptcy Approach, case study, Aghili Irrigation and Drainage Network, F. Ebrahimian, **M. J. Monem**, M. Delavar, 17th Iranian Hydraulic Conference, Shahre-Kord University, Share-Kord, Iran, 4-6 Sep. 2018. (In Persian)

138) Sensitivity Analysis of Irrigation Canal Capacity with Respect to Irrigation Duration Using Celman Model, (Case Study East Aghili Network) R. Naghaei, **M. J. Monem**, 4th Iranian Soil and Water Engineering & Management Congress, Agriculture and Natural Resources Campus, Tehran University, Karaj, Iran, 13-14 Nvo. 2018. (In Persian)

139) Development of Conceptual Model of Water Section in Water, Food, and Energy, Chain (NEXUS) in Irrigation Networks Based on Water Adequacy, and Equity Indicators, E. Ghorbani, **M. J. Monem**, 6th Water & Soil Management Scientific & Research Conference, Kerman, 6-7 March, 2019. (In Persian)

140) Sensitivity Analysis of Irrigation Canal Capacity With Respect to Farmers' Degree of Freedom Using First Clement's model (Case Study: East Aghili Canal), R. Naghaei, **M. J. Monem**, 3rd world Irrigation Forume, 1-7 September 2019, Bali, Indonesia.

141) Sensitivity Analysis of Farmers Degree of Freedom (E) on Canal Capacity in Second Clements Model, S. Ghafouri, **M. J. Monem**, 3rd world Irrigation Forume, 1-7 September 2019, Bali, Indonesia.

142) Hydraulic Evaluation of On-Request Methods in Irrigation Networks, (Case Study: East Aghili Canal, G. Hadiseraji, H. Savari, **M. J. Monem**, 5th Iranian Irrigation & Drainage National Congress, Birjand University, Birjand, 23-24 June 2021. (In Persian)

143) Decisions Which lead to More Water Deficit in Irrigation Networks Based on NEXUS Approach, and System Dynamics, M. Aslani, **M. J. Monem**, A. Bagheri, 5th Iranian Irrigation & Drainage National Congress, Birjand University, Birjand, 23-24 June 2021. (In Persian)

144) Analysis of Competition Between Farmers to Achieve Desired Water in Irrigation Networks, M. Aslani, **M. J. Monem**, 5th Iranian Irrigation & Drainage National Congress, Birjand University, Birjand, Iran, 23-24 June 2021. (In Persian)

145) Evaluation of On-Request Methods from Hydraulic Point of View in Irrigation Networks (Case Study: East Aghili Canal), G. Hadiseraji, H. Savari, **M. J. Monem**. 20th Iranian Hydraulic Conference, Gorgan University, Gorgan, Iran, 27-28 Oct. 2021. (In Persian)

146) Application of Control Algorithm in Design and Manufacturing of Hydro-mechanical gates, M. Aslani, **M. J. Monem**, 18th National Meeting, and 7th International Conference of Manufacturing and Production, Technical and Professional University, Tehran, Iran, 1-2- March 2021. (In Persian)

147) Determination the Canal Capacity and Attainable Flexibility of Irrigation Networks for arranged Delivery Methods (Case Study Ghazvin Network), S. H. Eftekhari, **M. J. Monem**, 21st Iranian Hydraulic Conference,

Shahid Chamran University, Ahvaz, Iran, 7-8 Feb. 2022. (In Persian)

148) Evaluation of the Arranged Delivery Method in Irrigation Networks Considering the Uncertainty using Hydrodynamic Model (Case Study Eastern Aghili canal), A. Khorshidi, **M. J. Monem**, M. Mazaheri, 21st Iranian Hydraulic Conference, Shahid Chamran University, Ahvaz, Iran, 7-8 Feb. 2022. (In Persian).

149) Sensitivity Analysis of Constant Values of State Variables in System Dynamic Model of Water, Food, Energy Chain of Nexus, Developed for Ghazvin Irrigation Network, M. Aslani, **M. J. Monem**, A. Bagheri, the 6th national meeting of Management of Irrigation and Drainage Networks, with emphasis on Sustainable operation, 28-29 Feb. 2022, Shahid Chamran University, Ahvaz, Iran. (In Persian)

150) Defining Descriptive Scenarios to clarify Land Salinity Parameters in the Conceptual Model of the developed nexus Chain in the Management of Irrigation Networks, M. Aslani, **M. J. Monem**, A. Bagheri, the 6th national meeting of Management of Irrigation and Drainage Networks, with emphasis on Sustainable operation, 28-29 Feb. 2022, Shahid Chamran University, Ahvaz, Iran. (In Persian)

151) Investigation of the Effect of Agricultural Extension Parameter Variations on Subsystems of Nexus Chain for management of Irrigation Networks, M. Aslani, **M. J. Monem**, A. Bagheri, the 6th national meeting of Management of Irrigation and Drainage Networks, with emphasis on Sustainable operation, 28-29 Feb. 2022, Shahid Chamran University, Ahvaz, Iran. (In Persian).

152) Investigation Effect of Dividing Wall Dimensions on the Performance of the Diversion Dam Sluiceway, M. Asadi, **M. J. Monem**, J. M. V. Samani, 22nd Iranian Hydraulic Conference, 8-9 Nov. 2023. Maragheh University, Maragheh, Iran. (In Persian).

153) Assessment of Climate Change Impact on Crop Water Requirements (Case Study: Moghan Irrigation Network-Iran), s. Rahmati, M. J. Monem, M. Delavar, 25th International Congress on Irrigation and Drainage, 1-10 Nov. 2023, Visakhapatnam, India.

154) Applying the TOPSIS algorithm in determining the priority of the best policy in the field of water, food, and energy resource chain management with a skilled approach in management decision-making, M. Aslani, M. J. Monem, A. Bagheri, 1st Iranian National Skill Conference, 22-23 April 2024, Iranian Technical and Vocational University (In Persian)

155) Decreasing the NEXUS Index Affected by the Growth of Destructive Environmental Variables (Land Salinity) in Different Scenarios in the Agricultural Fields of Qazvin Plain by Using System Dynamics Tools. M. Aslani, M. J. Monem, A. Bagheri, 4th World Irrigation Forum (WIF), 7-13 Sep. 2025, Kuala Lumpur, Malaysia.

9. Research Projects.

1) Preparation of Hydrodynamic Simulation Model ICSS for its Application in Iranian Irrigation Networks, National Research Project.

2) Performance Evaluation and Improvement of Irrigation Networks, Using Mathematical Model and Field Investigation, and Developing a Mathematical Model for their Optimal Operation, National Research project.

- 3) Verification of ICSS Mathematical Model With Real Situation, Applied Research, The University of Tarbiat Moddarress.
- 4) Determination of Performance Evaluation Framework for Irrigation Networks, Applied Resources Project, Water Resources Management Organization.
- 5) Stepwise Rehabilitation study of WID Irrigation Network in Calgary, Canada.
- 6) Study and Design of Measurement Structures for Improving Water Delivery in EID Irrigation Network, Calgary, Canada.
- 7) Iranian River Training System Optimization, Applies Research Office, Iranian Water Resources Management Co. 2008.
- 8) Management of Unsteady Flow in Main Canals of Irrigation Networks and Resolving Related Hydraulic and Managerial Problems, Applies Research Office, Iranian Water Resources Management Co. 2008.
- 9) Terms of Services for flood Control Works, Office of Standards and Technical Criteria, Iranian Water Resources Management Co. 2008.
- 10) Terms of Services for Wetlands and lakes' Delineation, Office of Standards and Technical Criteria, Iranian Water Resources Management Co. 2009.
- 11) Terms of Services and Guideline for Performance Evaluation of Pressurized and Low Pressure Main Systems of Irrigation Networks, Office of Standards and Technical Criteria, Iranian Water Resources Management Co., 2009.
- 12) Instruction for Preparing Technical Flood Report, Office of Standards and Technical Criteria, Iranian Water Resources Management Co. 2009.
- 13) Development of On-Request Delivery Systems in Irrigation Networks Using Re-Enforcement Learning Method (Case Study Dez Network) Applies Research Office, Iranian Water Resources Management Co. 2014.
- 14) Guidelines for Operation and Maintenance of Diversion Dams, Office of Standards and Technical Criteria, Iranian Water Resources Management Co., 2024, (Continued).

10- Books

- 1) Translation of " Rapid Appraisal Process RAP and Benchmarking Explanation and tools", 2001, Charls, M. Burt, By Working Group of Performance evaluation of Irrigation and Drainage systems, Iranian National Committee of Irrigation and Drainage, 2006, H. Gharavi, E. Farhadi, N. Borhan, A. Ghaheri, M. Ehsani, D. Bahrehdar, M. Esna-ashari, M.J. Monem.
- 2) Translation of "Managing Canal Operation", Robert Chambers, 1992, Oxford & IBH publishing co, By Working Group of Performance evaluation of Irrigation and Drainage systems, Iranian National Committee of Irrigation and Drainage, 2005, A. Ghaheri, **M. J. Monem** ,H. Gharavi, D. Bahrehdar, M. Ehsani, N. Borhan, A.

Zolfaghari, E. Farhadi

3) Principles, Modelling, and Delineation of Wetlands, 2011, **M. J. Monem**, M. Naseri, M. Bagherzadeh Karimi, PP. 187.

4) Translation of “The Irrigation Sector Shift from Construction to Modernization, What is Required for Success?” Dr. Charles M. Burt, 2011. As IRNCID Publication No. 158, 2013.

5) 2nd Edition of “Principles, Modelling, and Delineation of Wetlands”, 2025, M. Naseri, **M. J. Monem**, and group of Authors, 2025, Tehran University Publication, Pub. No. 4745, ISBN 978–964–03–7870–0, PP. 310.

11- Topic of Theses under my Supervision :

a) M. Sc.

1) Evaluation and Application of 2-Dmodel for Simulation of Flow Pattern Around Groins in River Meander, Faraz Rabei Gholami.

2) Performance Evaluation of Irrigation Networks Using Data Envelopment Analysis (DEA), Ebrahim Salehi Taleshi.

3) Developing a Performance Evaluation Model Using Combined Methods of Classical Approach and Rapid Appraisal, Ali Abbas Badzahr.

4) Optimal Water Delivery Schedule Using SA, Case study, Varamin Irrigation Network, Reza Namdarian.

5) Design and Study of Deflection Meter for Discharge Measurement, Ghader Shirinzadeh.

6) Performance Improvement of Irrigation Networks Using Sensitivity Analysis in DEA Models, Hessam Ghodousi.

7) Developing Mathematical Models of Control Systems, Neyrpic, Amil, Avis, Avio, and P+PR for Irrigation Canals, Alireza Massah.

8) Development of Optimal Water Delivery Schedule Model for Irrigation Canals using Genetic Algorithm. Saeb Khoshnavaz.

9) Calibration of Deflection-Meter for Canals with Different Cross sections and testing its field's application Ensieh Mehrabi.

- 10) Performance Evaluation of Irrigation Networks using Fuzzy Logic, Case Study: Behbahan Irrigation Network, Jamshid Khorrami.
- 11) Development of Mathematical Model for Neyrpic, Amil, Avis, Avio, P+PR, and BIVAL Control systems In Irrigation Canals, Jafar Mamizadeh.
- 12) Development of Decision Support System for Performance Evaluation and Improvement of Irrigation Networks, Masomeh Khalkhali. 1384.
- 13) Definition and quantification of physical and operational performance indicators for irrigation canals using hydrodynamic models, Farzad Pasyar, 1384.
- 14) Development of Mathematical Model for Fuzzy Control System In Irrigation Canals, M.S. Kiapasha, 2006.
- 15) Management Evaluation and Improvement of Reservoirs in Operation of Irrigation Networks, H. Eslambolchizadeh, 2006.
- 16) Evaluation and Ranking of 4 units of Moghan Irrigation Network using Classical Approach, A.Ahmadi Fakhrabad, 2007.
- 17) Development of Water Delivery Scheduling Model For Irrigation Networks Using PSO Optimization Technique, M.A. Noori, 2007.
- 18) Development of Performance Evaluation Model for Pressurized Irrigation Networks, using Classical Approach, P. Mahdavi, 2007.
- 19) Performance analysis of Irrigation Networks Using Classic and Fuzzy Clustering Methods (Case Study Ghazvin Irrigation Network), S.M. Hashemi Shahedani, 2007.
- 20) Optimal Design of Pressurized Irrigation Water Distribution Networks Using PSO Optimization Method, B. Sami Kashkooli. 2007.
- 21) Development and Test of Mathematical Model of CARDD Automatic Control System for Irrigation Canals, S. P. Ahmadpanah, 2007.
- 22) Design and development of Mathematical and Physical Model of Automatic Pivot Weir and testing its Automatic System, Z. Hoseinzadeh, 2008.
- 23) Construction and Test of Automatic Control System of Irrigation Canals Using PID and BIVAL Algorithm At Laboratory Model. K. Shahverdi, 2008.
- 24) Development and Completion of Performance Evaluation of Pressurized Irrigation Network (PAPIS) Model,

Case Study of Mianeh, Aidoghmoosh, S. Piri, 2008.

25) Application of System Dynamics Approach for Modernization of Irrigation Networks by Quantifying Relevant Functions From Efficiency Point of View, Case Study: Ghazvin Irrigation Network, A. Hatam, 2009.

26) Construction and Evaluation of Fuzzy Automatic Control System for Irrigation Canals at Laboratory Scale, R. Nowrasteh, 2010.

27) Evaluation the Effectiveness of Improvement Actions of Moghan Irrigation and Drainage Networks, B. Shifteh, 2010.

28) Optimal Water Distribution and Delivery Scheduling In Irrigation Networks Under Drought condition, Case Study of Ghazvin Irrigation Network, M. Mohammadkhani,, 2010.

29) Study the Condition of Check Structures in the Main Irrigation Canals, and Introducing Improvement Options and Appropriate Structures, Case Study of Foomanat Irrigation Network, S. M. Safavi, 2010.

30) Improvement of Irrigation Networks From Process Indicators Point of View Using System Dynamics Approach, Case Study Foomant Irrigation Network, S. Shabani Koorka, 2011.

31) Development of Performance Evaluation of Automatic Control Systems in Irrigation Networks, F. Sadeghi, 2011.

32) Development of Intelligent Model for Determination of Classical PID Control Coefficients in Irrigation Canals linked with ICSS Model, S. S. Jamali, 2011.

33) Data Mining for Recognition of Performance Patterns of Irrigation Networks and Management Operational Improvement, V. Ghadbeigi, 2011.

34) Extraction the Hydraulic Equations of Pivot Weir with Different side Contractions and Completion of its Mathematical Model, N. Sheikh Rezazadeh Nikoo, 2011.

35) Recognition the Archie-Types of Automation Application in Ghazvin Irrigation Network Using System Dynamics Approach, S. Z. Moosavi Hasani, 2012.

36) Experimental Study of Hydraulics and Operational Conditions on Performance of Lopac Gate, F. Yosefvand, 2013.

37) Development of Mathematical Model of Lopac Gate linked with ICSS Model, R. Naghaei, 2013.

38) Testing the Application of Lopac Gate in Irrigation Canal and its Comparison to Other Conventional Structures Using ICSS Mathematical Model, S. Sadeghi, 2013.

39) Experimental Study of One Baffle Nyrpic Gates for Improvement of Their Flow Delivery Uniformity, H. Noori, 2013.

40) Evaluation Performance of Gotvand Irrigation and Drainage System with MASSCOTE, S. Rahmati, 2014.

41) Classification of Iranian Irrigation Networks based on Problems of Control Structures and introducing

Common Improvement Options for Their Performance Improvement, F. Karimi, 2014.

42) Management of Water Distribution in Irrigation Networks Under Water Deficit Condition Using Hydrodynamic Models, S. Ostovari, 2015.

43) Investigation the Possibility of Using Artificial Neural Networks for Simulation of Irrigation Networks as a Substitute for Hydrodynamic Models, R. Davarpanah, 2015.

44) Management of Water Distribution and Improving Water Productivity in Irrigation Networks Under Water Deficit Condition Using Hydrodynamic models and Crop Production Patterns, F. Ebrahimian, 2016.

45) Development of Water Energy Food NEXUS Approach for Performance Improvement of Irrigation Networks, S. M. Hoseini, 2016.

46) Application of System Dynamics for Water, Energy, Food NEXUS for Management of Irrigation Networks from Productivity and Water delivery indices (Case Study Ghazvin Irrigation Network) E. Ghorbanali, 2017.

47) Investigation of Canal Capacity for arranged Delivery Using Sensitivity Analysis of 2nd Celman Model, S. Ghafouri Bidgoli, 2018.

48) Flexibility Evaluation of Arranged Delivery from Hydraulic Point of view in Irrigation Networks, G. Hadiseraji, 2019.

49) Analysis the Request of Farmers in Arranged Delivey Method and its Impact on Irrigation Canal Capacity Case Study: Khozestan Irrigation Networks, S. F. Jazaeiri, 2020.

50) Determination The Achievable Flexibility in Irrigation Networks by Application of Arranged Delivery Method (Case Study of Ghazvin Irrigation Network), S. H. Eftekhari, 2021.

51) Evaluation of arranged distribution method in irrigation networks considering the uncertainty of operation using hydrodynamic model. A. Khorshidi, 2022.

52) Developing the Application of Importance-Performance Analysis (IPA) in Evaluating Challenges and Improving the Performance of Irrigation Networks (Case Study: Qazvin Irrigation Network), Sina Shahbi, 2025.

53) Optimization of Solar Panel Installation on irrigation Casnals for Enhancing Energy Generation, Evaporation Reduction, and Water Productivity Enhancement using Nexus Approach , Mohammad Hosein Yaghobi, 2025.

b) Ph.D.

1) Development of a mathematical Model for Optimization of Hydraulic Performance of Irrigation Canal Using Simulated Annealing and Determining Relative Value of Performance Indicators, S. A. Mohseni Moovahhed, 2004.

2) Stepwise Performance Evaluation of Irrigation Networks Under Different Management Systems Using Fuzzy Logic. S. A. Hydarian. 2005.

- 3) Optimization of Surge Irrigation Using Tabu Search, S. A. A. Sadreddini, 2005.
- 4) Optimal Control of Canal Systems using Numerical Optimization Methods, D. Farsadi-Zadeh, 2006.
- 5) Development of a Mathematical Model for Optimum Management of Irrigation Canals under Conjunctive Use of Surface and Groundwater conditions, A. Emadi. 2006.
- 6) Development of a Mathematical Model for Comprehensive management of Unsteady flow in Irrigation Canals, H. Ghodoosi.2006.
- 7) Model Development for Irrigation Networks Rehabilitation, Using System Dynamics Approach, M. Vaez Tehrani, 2010,
- 8) Optimal Operation of In-Line Reservoirs in Main Irrigation Canals Usin Model Predictive Control, S. M. Hashemi Shahedani, 2011.
- 9) Development of An Integrated Optimal Water Allocation and Distribution Model at Different Levels of Irrigation Networks, A. Kanooni, 2011.
- 10) Development of Decision Support System for Irrigation Networks Automation Using Combined Multi-Criterion Decision Making and System Dynamics (Case Study of Ghazvin Irrigation Network) Z. Hosseinzadeh, 2011.
- 11) Development of On-Request System in Irrigation Networks Using Re-Enforcement Learning Method, (Case Study of Dez Network), K. Shahverdi, 2012.
- 12) Development The Basis of On-request Methods in Irrigation Networks and Introducing Their Suitable Operation Using Optimization Methods Neural Networks, H. Savari, 2014.
- 13) System Dynamic Modelling of Water, Food, Energy NEXUS for Irrigation Networks Management (Case Study: Ghazvin Irrigation Network) M. Aslani, 2017.
- 14) Analytical Analysis and Planning Arranged Delivery Method in Accordance with Existing Irrigation Canals and Development a Method for Determining Operational Patterns Using Intelligent Techniques, R. Naghaei, 2017.
- 15) Optimization of Agricultural and Irrigation Management Under Deep Uncertainty of Climate Change, S. Rahmati, 2021.
- 16) Application of Uncertainty on Arranged Delivery Method to Determine Irrigation Canal Capacity and Operation, Z. Kashkaki, 2021.

17) Determination of Suitable Physical Characteristics of Sluiceway for Different Flow and Operational Conditions using FLOE-3D Model, M. Asadi, 2022.

18) Optimization of Water delivery Scheduling and Pressure Reduction Equipment in Pressurized Irrigation Networks for different Water Availability, A. Ketabi, 2024.

19) Improving water, food and energy security in the Nexus cycle by optimizing the installation of solar systems in irrigation networks, Milad Rezaei, 2025.

12- Topics of Theses Under my Co-Supervision:

a) M.Sc.

1) Determination of Optimal Water Distribution for Irrigation Networks Using Hydrodynamic Model and Multi-objective Analysis (Case study of Gnoori - Cha: Irrigation Network). Shahram Kasbdooz, 1379.

2) Performance Evaluation of Mahabad Irrigation and Drainage Network Using Dveloped Data Bank. Ahmad Shokat Naghadeh, 1380.

3) Flood Routing Over and Through Submerged Rock Fill Dams, Korosh Ghaderi, 1381.

4) Comparison of Mathematical Model for Flood Routing in Several Rock Fill Detention Dams, Behzad Kalagar Naft Chali 1382.

5) Performance Evaluation of Irrigation Systems Using Benchmarking Method and Determining Relative Value of Indicators, Jalal Jalili 1383.

6) Investigation of Performance Evaluation in Ministry of Energy, and Introducing Appropriate Evaluation System for Operational Management of Irrigation Systems, Ahmad Poorzand 1378.

7) Design and Evaluation of Irrigation Networks for On-Demand Systems, Case Study Design of Kharajoo Chai Irrigation Network using Coupam model. Azin Zamanzadeh, 1385

8) Application of Genetic Algorithm for Optimal Design of Damping Reservoir, Conveyance Conduit, and Penstock in Hydro Electric Power Stations, Sadegh Haghghi poor, 1386.

9) Application of Genetic Algorithm for Optimal Estimation of Roughness Coefficient for Old Pipes in Pressurized Systems Using Inverse Solution. Maryam Shahbazi, 1386.

10) Water Level Management in Controlled Drainage Systems with the Purpose of Decreasing Water Consumption and Nitrogen in Outflows, A. Najafi Siahroodi, 2009.

11) Assessment of Coherence Model to Determine the Spatial and Temporal Salinity Intrusion Pattern in Bahmanshir River, S. P. Pirnia, 2010.

b) Ph.D

- 1) Optimal Design of Groundwater Monitoring Network Using PSO Optimization Technique, N. Ganji Khoramdel, 2007.
- 2) Optimization of Water Allocation in Some parts of Karkheh Water Shed Based on Environmental Stability Indices, A. H. Eizad Dosstdar, 2011.
- 3) Re-Design of Irrigation Canals Based on On-Demand and Automatic Systems, S, Nikmehr, 2012.
- 4) Performance Evaluation and Multi-Objective Optimization of Operation of Irrigation Canals Network, Case Study, Zarrineh-Rood, Miandoab, S. Khoda-Dadi, 2015.

13- Lectures

- B.Sc. 1) Design of Irrigation Networks.
 2) Design of Diversion Dams.
- M.Sc. 3) Open Channel Hydraulics,
 4) Computer Application in Water Related Subjects,
 5) Design of Control Structures
 6) Design of Small Dams
 7) Computer Programming
 8) Design of Irrigation Networks
 9) Management of Irrigation Networks
- Ph.D. 10) Principles of Evaluation of Irrigation and Drainage Projects.
 11) Computational Hydraulics,
 12) Optimization of Irrigation Networks
 13) Design of Diversion Structures

14- References

- 1) Dr. Kamran Davari, Department of Irrigation, Faculty of Agriculture, Ferdowsi University, Mash-had.
- 2) Dr. Mehdi Yasi, Department of Irrigation, Faculty of Agriculture, Tehran University.
- 3) Dr. Ebrahim Amiri Tokaldani, Department of Irrigation, Faculty of Agriculture, Tehran University.

15- Other Activities

- 1) Director of Monitoring and Evaluation Council for Faculty of Agriculture and Member of Monitoring and Evaluation Council for the University of Tarbiat Modares.
- 2) Director of Office of Standard and Technical Criteria, Deputy of Research, Iran Water Resources Organization, Ministry of Energy.
- 3) Irrigation and Drainage Technical Advisory for The Scholarship Department of The Ministry of Science, Research and Technology.
- 4) Member of Performance Evaluation Working Group of Iranian Committee of Irrigation and Drainage.
- 5) Director of Irrigation and Drainage Technical Committee, For The Office Of The Research and Scientific Supports, Water Resources Management Organization, Ministry of Energy.
- 6) Member of Irrigation and Drainage Technical Committee for the Office of Standard and Technical Criteria, Water Resources Management Organization, Ministry of Energy.

7) Head of Hydro-Informatics Department, Water Engineering Research Center, The University of Tarbiat Moddarress.

8) Member of Executive Board of Iranian National Committee of Irrigation and Drainage, from Oct. 2010 till Jan 2016.

9) Head of International Research Program For Irrigation and Drainage Iranian Regional Node, Affiliated to ICID. From 2011 till 2019.

10) Member of Technical Committee of Energy and Water, Renewable Energy Technology Development Headquarter, Science and Technology Secretary of President, from 2012 till 2014.

11) Member of Agricultural Technical Committee of the Board of Audit of Tarbiat Modares University, from 8 Sep. 2018 till 8 Sep. 2020

12) Representative of the Executive Board of Recruitment at the Faculty of Agriculture, Tarbiat Modares University, from 2/18/2025 to date